

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

Claim 1 (Previously Presented) A medical device comprising a composite having an inorganic substrate and a polymer covering at least a portion of the substrate, the polymer forming a structure substantially different from the structure of the substrate, and providing the form of the device.

Claim 2 (Original) The medical device of claim 1 wherein the inorganic substrate comprises metal.

Claim 3 (Original) The medical device of claim 1 wherein the inorganic substrate comprises a ceramic.

Claim 4 (Canceled)

Claim 5 (Previously Presented) The medical device of claim 1 wherein the polymer is selected from the group consisting of polyetheretherketones, polyacetals, polyethersulfones, polyarylsulfones, polyetherimides, polycarbonates, and polysulfones.

Claim 6 (Original) The medical device of claim 1 wherein the polymer has an average thickness of at least about 10 microns.

Claim 7 (Original) The medical device of claim 1 wherein the polymer has an average thickness from about 100 microns to about 2000 microns.

Claim 8 (Original) The medical device of claim 1 wherein the medical device comprises a heart valve prosthesis, the heart valve prosthesis comprising a component that comprises the composite having the inorganic substrate and the polymer material.

Claim 9 (Original) The medical device of claim 1 wherein the polymer material has structure forming a slot, hole, pin, button, barb or anchor.

Claim 10 (Previously Presented) A medical device comprising a flexible composite component comprising an inorganic substrate and a polymer member covering at least a portion of the substrate, wherein the flexible composite component can be bent at least about 100 degrees without extending the flexible composite component beyond its elastic limit.

Claim 11 (Original) The medical device of claim 10 wherein the inorganic substrate comprises a metal foil with a thickness less than about 500 microns.

Claim 12 (Original) The medical device of claim 10 wherein the polymer is selected from the group consisting of polyurethanes, polydimethylsiloxanes and polytetrafluoroethylenes.

Claim 13 (Original) The medical device of claim 10 wherein the polymer member has a thickness from about 10 microns to about 500 microns.

Claim 14 (Original) The medical device of claim 10 wherein the polymer member has a thickness from about 50 microns to about 300 microns.

Claim 15 (Previously Presented) The medical device of claim 10 wherein the medical device comprises a heart valve prosthesis and the composite component comprises leaflets.

Claim 16 (Previously Presented) The medical device of claim 10 wherein the flexible composite component can be bent about 180 degrees without extending the flexible composite component beyond its elastic limit.

Claim 17 (Previously Presented) The medical device of claim 10 wherein the flexible composite component can be bent about 180 degrees with a radius of curvature of about the thickness of the composite without extending the flexible composite component beyond its elastic limit.

Claim 18 (Previously Presented) The medical device of claim 10 wherein the flexible composite component can be bent about 60 degrees for about 40 million cycles without significant structural failure.

Claim 19 (Previously Presented) The medical device of claim 10 wherein the flexible composite component can be bent about 60 degrees for about 400 million cycles without significant structural failure.

Claim 20. (Original) The medical device of claim 10 wherein the composite further comprises a diamond-like carbon coating over at least a portion of the polymer.

Claims 21 - 30 (Canceled)

Claim 31 (Previously Presented) The medical device of claim 1 wherein the polymer is crosslinked.

Claim 32 (Previously Presented) The medical device of claim 1 wherein the polymer is rigid.